

REMARKS

The undersigned thanks Examiner Wright for the courtesies extended during the interview of March 9, 2010. During the interview, the Examiner suggested amending the independent claims as shown in this Amendment to overcome the pending rejections under 35 USC 112 and 35 USC 103. The Examiner further explained that the amendments herein would not introduce new matter.

The Interview Summary states:

Agreement with respect to the claims was reached.

The Examiner and Mr. Dave discussed amendments to the wherein clause of the independent claims to overcome the 35 USC 112, first paragraph rejection. In addition, the Examiner and Mr. Dave discussed limiting the fluid movement to that solely caused by field-force gradient mechanism and not fluid flow resulting from vacuum or pressure pumps in the independent claims.

Applicants have accordingly amended the independent claims and respectfully request reconsideration of the present Application in view of the foregoing amendments and in view of the reasons that follow.

With this Amendment, Claims 1, 22, 68 and 69 have been amended; no Claims have been canceled; and, no Claims are new. A detailed listing of all claims that are, or were, in the Application, irrespective of whether the claims remain under examination in the Application, is presented, with appropriately defined status identifiers. Thus, Claims 1, 10-17, 19-22, 31-40, 64-66 and 68-73 remain pending in the Application.

Support for the amendments to Claims 1, 22, 68 and 69 can be found in the disclosure in at least the following: "wherein the fluid movement of the fluid from the source fluid flow channel to the target fluid flow channel via the porous silicon membrane located in the cross-channel area is produced solely by the field-force/gradient mechanism" is shown in Figure 3d and "wherein the upper substrate member comprises a first cavity or the lower substrate member comprises a second cavity, and wherein a portion of the porous silicon membrane is located in a hollow space formed by the first or second cavities" is disclosed in "the original specification

[that] does support a recess 124 formed in either the upper or lower substrate member” as per the Examiner on page 3, lines 2-3, of the Action. No new matter has been added.

Objection to the specification

The outstanding Official Action has objected to the specification as allegedly failing to provide proper antecedent basis for the claimed subject matter.

This objection is respectfully traversed.

The Examiner states on page 3, lines 2-3, of the Action that “the original specification does support a recess 124 formed in either the upper or lower substrate member (see paragraphs [0027] and [0037]).” Paragraph [0027] of the specification states that the recess can “be formed in either the upper or lower substrate member.” This does not mean, as construed by the Examiner, that the recess can be formed only in the upper or only in the lower substrate member. Persons of ordinary skill in the art would recognize that the meaning of either A or B in a patent application means A and/or B. Similarly, a recess “formed in either the upper or lower substrate member” means a recess in the upper or lower substrate, or in both as desired.

Claims rejections under 35 U.S.C. § 112, first paragraph

The outstanding Official Action has rejected claims 1, 10-17, 19-22, 31-40, 64-66, and 68-73 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement.

This rejection is respectfully traversed.

Applicants respectfully submit that when a disclosure describes a claimed invention in a manner that permits one skilled in the art to reasonably conclude that the inventor possessed the claimed invention the written description requirement is satisfied. (MPEP §2163 (emphasis added)). This possession may be shown in any number of ways and an Applicant need not describe every claim feature exactly because there is no *in haec verba* requirement. (MPEP § 2163). Rather, to satisfy the

written description requirement, all that is required is “reasonable clarity.” (MPEP § 2163.02).

Applicants submit that this rejection was made in the Action of February 9, 2009, then withdrawn in the Action July 10, 2009, in response the Amendment of May 11, 2009. On page 2, first paragraph of the Action of July 10, 2009, the Examiner states, “Any objection/rejection not repeated herein have been withdrawn.” Subsequently, in the Amendment of October 13, 2009, Applicants did not amend claim 1 other than change the term “the porous membrane” to “the porous silicon membrane” at some occurrences so as to be consistent with “a porous silicon membrane” earlier recited in claim 1. In addition, the phrase “is configured to produce” was changed to “produces.” However, neither of these two changes introduces any new matter in claim 1. During the interview of March 9, 2010, the Examiner explained that the limitation starting from “wherein the porous silicon membrane” in independent claims 1, 22, 68 and 69 has redundant language and suggested amending claims 1, 22, 68 and 69 as amended in this Amendment to overcome the rejection under 35 U.S.C. § 112, first paragraph. As Applicants have amended claims 1, 22, 68 and 69 as suggested by the Examiner, the rejection under 35 USC 112, first paragraph, as allegedly failing to comply with the written description requirement should be withdrawn.

Claims rejections under 35 U.S.C. § 103

The outstanding Official Action has rejected claims 1, 10-17, 19-22, 31-40, 64-66, and 68-73 under 35 U.S.C. § 103 as allegedly being unpatentable over Freeman et al. (U.S. Patent Publication No. 2003/0104512, hereinafter Freeman).

This rejection is respectfully traversed.

“Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”. *KSR Int’l Co. v. Teleflex Inc.*, No. 04-1350, slip op. at 11 (U.S. April 30, 2007)(citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Claims 1, 22, 68 and 69 now recite that “wherein the fluid movement of the fluid from the source fluid flow channel to the target fluid flow channel via the porous silicon membrane located in the cross-channel area is produced solely by the field-force/gradient mechanism.” The Examiner recognized during the interview of March 9, 2010, that Freeman **fails to disclose** that the fluid movement of the fluid from the source fluid flow channel to the target fluid flow channel via the porous silicon membrane located in the cross-channel area is **produced solely** by the field-force/gradient mechanism. In paragraph [0044] of Freeman, it discloses: “Fluid in channels 110 and 111 connecting wells 101 and 102 are preferably achieved by vacuum suction with **superposed** electrokinetic pumping across each opening in the substrate membrane using the electrodes at the test site (emphasis added).” In paragraph [0045] of Freeman, it discloses: “This approach of global hydraulic pressure with **superposed** electrokinetic pumping is one inventive concept of the current invention (emphasis added).” In short, there is nothing in Freeman that would have taught or suggested to persons of ordinary skill in the art that the fluid movement of the fluid from the source fluid flow channel to the target fluid flow channel via the porous silicon membrane located in the cross-channel area should be produced solely by a field-force/gradient mechanism.

Furthermore, Claims 1, 22, 68 and 69 recite that “the source fluid flow channel crosses over the target fluid flow channel in an **X fashion** at the cross-channel area.” Freeman fails to teach or suggest this limitation. The reasons are as follows.

On page 6, paragraph 9, of the Action, the Examiner states that a source fluid flow channel reads on the upward extending well 16 in communication with channels 110 or 111 in paragraphs [0044] of Freeman and that a target flow channel reads on fluid flow channel 28. Then, the Examiner states in the same paragraph of the Action that “the source fluid channel crossing over the target fluid flow channel in an “X” fashion at the cross-channel areas (at the porous membrane), see embodiment of Fig. 5 and paragraph [0045].”

Applicants respectfully submit that there appears to be an inherent dichotomy in this argument. If the term “a source fluid flow channel” reads on the upward extending well 16 and the term “a target flow channel” reads on the fluid flow channel 28 (see Figure 1 of Freeman), then the source fluid flow channel does **not** cross over the target fluid flow channel in an X fashion at the cross-channel area in Freeman as the upward extending well 16 and the fluid flow channel 28 are **not** configured to meet in an **X fashion**.

If the term “the source fluid channel” reads on channel 110 or 111 and the term “a target flow channel” reads on line 122 (or vice versa), then Figure 5 and paragraphs [0044] and [0045] of Freeman, fail to disclose that “the source fluid flow channel crosses over the target fluid flow channel in an **X fashion** at the cross-channel area.” During the interview of March 9, 2010, the Examiner acknowledged that while she has considered flow cell 103 in Figure 5 to be the location where the source fluid flow channel crosses over the target fluid flow channel in an **X fashion**, the fact remains that Freeman does **not** disclose the input to flow cell 103 of the fluid channel 110. In short, persons of ordinary skill in the art can only hypothesize that the arrangements of the input and output streams of fluid channels 110 and 122 are such that the source fluid flow channel crosses over the target fluid flow channel in an **X fashion** at the cross-channel area, but there is **no** teaching or suggestion in Freeman to this effect. Therefore Applicants respectfully submit that a statement that Freeman discloses that “the source fluid flow channel crosses over the target fluid flow channel in an **X fashion** at the cross-channel area” would be a mere conclusory statement.

Double patenting rejection

The outstanding Official Action has provisionally rejected claims 13, 14, 34, and 35 on the grounds of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 38, 39, and 41 of co-pending Application No. 10/856,372, which is held in abeyance until indication of allowance of the claims.

This rejection is respectfully traversed and should be held in abeyance until indication of allowance of claims.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance. The Director is authorized to charge any fees necessary and/or credit any overpayments to Deposit Account No. 03-3975, referencing Docket No. 043395-0378243.

Respectfully submitted,

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